PERFORMANCE WORK STATEMENT; Amend 21
TSAWP MULTIPLE AWARD CONTRACT TASK ORDER
EP-C-17-046; 68HERC19F0287

A. TITLE: Technical Support for West Virginia Ionic Toxicity TMDLs

Task Order Contracting Officer's Representative (TOCOR)
Jillian AdairIrene Shandruk
adair.jillianshandruk.irene@epa.gov
215-814-21665713

Alternate TOCOR
Gregory VoigtJillian Adair
voigt.gregoryadair.jillian@epa.gov
215-814-5713137

Period of Performance
10/01/2019 to 0612/301/20221

B. OBJECTIVES AND BACKGROUND

Objectives

The purpose of this Performance Work Statement (PWS) is to support Total Maximum Daily Loads (TMDL) development by the West Virginia Department of Environmental Protection (WVDEP) for West Virginia waterbodies where ionic toxicity has been identified as a contributing cause of biological impairment. Specifically, an appropriate and scientifically defensible TMDL endpoint, or multiple endpoint options, will be developed from data and technical analyses. Stakeholder engagement and model development to support the ionic toxicity TMDL development are also needed. A pilot ionic toxicity TMDL model will be developed for the Lower Guyandotte River Watershed.

Background on West Virginia Ionic Toxicity TMDLs

To establish a TMDL for waterbodies identified as biologically impaired on West Virginia's Section 303(d) list, WVDEP identifies the cause of the biological impairment, *i.e.,* the type of pollutant that will be allocated in the TMDL(s) to address the biological impairment, through a stressor identification procedure completed during the TMDL development phase. In the course of working on previous TMDLs, WVDEP identified certain waters as biologically impaired due to ionic toxicity. Ionic toxicity results from the presence of excessive amounts of dissolved solids (e.g., mineral salts) in a waterbody and can cause biologic impairment by adversely impacting aquatic life. While WVDEP has historically had sufficient information regarding instream ionic toxicity levels and their effects on benthic macroinvertebrates to identify ionic toxicity as a cause of biological impairment in these waters, WVDEP lacked sufficient information about which particular dissolved solid(s) (e.g. sulfate, bicarbonate, magnesium, chloride, potassium, etc.)

caused the ionic stress, and their associated impairment thresholds and their sources, to establish a defensible TMDL.

In the fall of 2010, EPA and WVDEP began a project to develop a pilot TMDL for ionic toxicity in streams in the Upper Kanawha Watershed. EPA and WVDEP collaborated on workgroups focused on TMDL planning, endpoint development, model development, and treatment technology. During the pilot project, a TMDL endpoint was proposed for specific conductivity and a model was developed. WVDEP ended participation in the pilot project in April 2012, citing state legislation that required the development of new assessment methodology to determine biological impairment. Since that time, WVDEP has developed hundreds of pollutant TMDLs that address biological impairment caused by stressors other than ionic toxicity.

EPA and WVDEP have acknowledged the need to show progress in developing ionic toxicity TMDLs. EPA and WVDEP need contractor support for determining ionic toxicity TMDL endpoint(s), stakeholder engagement and model development. EPA and WVDEP are interested in developing ionic toxicity modeling tools in a pilot watershed where TMDL development is currently occuring. As part of its Watershed Management Framework approach to TMDL development, WVDEP is developing TMDLs in the Lower Guyandotte River Watershed for other pollutants (fecal coliform bacteria, total iron and selenium) with anticipated completion by ~~February~~ 2022~~1~~. Potential waters from the Lower Guyandotte River Watershed to be included in pilot model development are included in Attachment 1.

C. TASKS

The contractor shall provide support for the below tasks. Written technical direction shall be utilized to provide further detail on specific work included in the PWS, provide guidance, or approve or comment on deliverables and timelines. The Task Order Contracting Officer Representative (TOCOR), the Alternate TOCOR (if the TOCOR is on leave or travel), and the Contracting Officer are the only individuals authorized to issue technical direction. The contractor shall anticipate working with the TOCOR, staff leads from EPA's Water ~~Protection~~ Division ~~(WPD)~~ and WVDEP to furnish the requested technical assistance. **However, only the TOCOR may issue written technical direction.**

Task 1: Kickoff Meeting, Reporting, and Communication

The contractor shall participate in a Kickoff Meeting with the TOCOR ~~either in person or~~ via conference call to discuss the following: points of contact, roles and responsibilities, timelines, the schedule of benchmarks, milestones and deliverables, establish dates and times for monthly calls, monthly technical progress reports, and general Task Order administrative information. The technical progress reports shall include status updates of all of the tasks of this PWS.

The TOCOR will coordinate and set-up monthly working calls between EPA staff, WVDEP staff, and the contractor's technical lead to discuss the status and progress of the work under this Task Order. The contractor shall participate in these monthly calls. The frequency of the monthly conference calls may be modified based on project status at the request of the contractor and only as approved by EPA.

The contractor shall notify the TOCOR of any problems, delays or questions as soon as they arise, including immediate written notification of any Task Order delays. The contractor shall provide a written monthly status report in accordance with contract requirements which shall be used for invoice review purposes. All reporting shall be provided in accordance with the PWS Sections E and F.

In general, written materials including meeting summaries shall be furnished by the contractor within one week~~five business days~~ after request in draft form for the TOCOR to review; then a final written deliverable would be expected within one week~~five business days~~ after receipt of written technical direction from the TOCOR, including the TOCOR's comments and edits to the draft deliverable.

Task 1 Deliverables: Meeting summaries following conference calls

Task 2: West Virginia Ionic Toxicity TMDL Support

Task 2.1: Facilitation Support for WV Ionic Toxicity TMDL Technical Workgroups

The contractor shall organize monthly conference calls and/or webinars of the WV Ionic Toxicity TMDL Technical Workgroups, as needed (Endpoint Development Workgroup, ~~and~~ Modeling Workgroup, and Treatment Technology Workgroup) ~~and attend up to two in-person meetings to discuss TMDL endpoints and approach for model development~~. The contractor shall work closely with the Workgroups and prepare agendas and meeting summaries~~minutes~~. When requested by the TOCOR, the contractor shall prepare meeting presentations and/or materials on technical aspects of the TMDL endpoint analyses, model development approach, or treatment technologies and be prepared to answer questions. The frequency of the monthly conference calls may be modified based on the project status at the request of the contractor and only as approved by EPA. ~~Any in-person meeting will be held at the WVDEP Headquarters in Charleston, WV.~~

Task 2.1 Deliverables: Agendas and~~,~~ technical presentations and/or materials, meeting summaries~~minutes~~, and correspondence from Workgroups~~committee~~ for the monthly calls of the Ionic Toxicity TMDL Technical Workgroups.

Task 2.2: Technical Support for Ionic Toxicity TMDL Endpoint Development

Under a previous Task Order, options for proposed ionic toxicity TMDL endpoints were prepared through data and technical analysis[1]. The proposed TMDL endpoints and rationale will serve as a starting point. The contractor shall utilize water quality and biological data provided by EPA and WVDEP to perform additional technical and statistical analyses to develop an appropriate, scientifically defensible, and specific numeric TMDL endpoint, or multiple numeric endpoint options, to address biological impairments caused by ionic toxicity. To properly characterize ionic strength, general measures of electrical conductivity, such as specific conductivity and total dissolved solids (TDS), as well as individual ions (e.g. sulfate,

[1] Previous Task Order ionic toxicity endpoint deliverables can be made available during the bidding process, as requested.

bicarbonate, magnesium, chloride, potassium, etc.) should be analyzed to identify which one ion or combination of ions contribute(s) significantly to biological impairment. The contractor shall participate in monthly conference calls of the WV Ionic Toxicity TMDL Technical Workgroups ~~and attend up to two in-person meetings~~ to discuss TMDL endpoints and approach for model development. ~~Any in-person meeting will~~shall ~~be held at the WVDEP Headquarters in Charleston, WV. When requested by the TOCOR, the contractor will~~shall ~~prepare TAC meeting presentations and/or materials on technical aspects of the TMDL endpoint analyses and model development approach and be prepared to answer questions.~~ The contractor shall prepare a draft and a final version of the Ionic Toxicity TMDL Endpoint document providing a detailed overview of the data and technical analyses used to identify water quality endpoints for ionic toxicity. The contractor shall also furnish all data, files and code used in endpoint development. The data must be accompanied by an inventory list describing the data in the contractor's submittal.

Task 2.2 Deliverables:

~~Deliverable 2.2.1: Technical presentations and/or materials for the monthly calls of the Ionic Toxicity TMDL Technical Workgroups.~~

Deliverable 2.2.1~~2~~: Ionic Toxicity TMDL Endpoint document (draft and final)

Deliverable 2.2.2~~3~~: All data, files, and code for any statistical software used in endpoint development

Task 2.3: Ionic Toxicity TMDL Model Selection

The contractor shall work with EPA and WVDEP to determine an appropriate model to address waters impaired by ionic toxicity. EPA will share previous work products, including a TMDL modeling development using WVDEP's Mining Data Analysis System (MDAS)[2] as a starting place for these deliberations. Recommendations should consider the availability of data and existing model set up for previous or current TMDL project areas. The contractor may make new approach recommendations based on their modeling expertise. Using literature reviews or other technical analyses, the contractor shall characterize potential general sources of ionic toxicity including mining, wastewater treatment plants, straight pipes, etc. to incorporate into the modeling framework. The characterization of hydrologic alterations due to mining and potential similarities to glacial till hydrology should be explored. The contractor shall provide model recommendations based on the complexity of the pollutant loading dynamics, sources, data availability, etc. Ionic toxicity model recommendations should be compatible with WVDEP's current modeling platform so that future ionic toxicity modeling can make use of hydrology calibrations already completed for previous TMDL project areas. The contractor shall prepare a memo summarizing the model selection, which will include model programs, watershed boundaries, modeling timeframe, as well as other elements the contractor deems appropriate.

[2] MDAS was developed specifically for TMDL application in West Virginia to facilitate large scale, data intensive watershed modeling applications. MDAS is based upon Hydrologic Simulation Program–FORTRAN (HSPF) but has no inherent limitations in terms of modeling size or upper limit of model operations. The dynamic watershed model component within MDAS is the Loading Simulation Program–C++ (LSPC) (Shen, et al., 2002). The model simulates nonpoint source flow and pollutant loading as well as instream flow and pollutant transport and is capable of representing time-variable point source contributions.

Task 2.3 Deliverables: Model Selection Memo

Task 2.4: Ionic Toxicity TMDL Modeling QAPP Development

The contractor shall prepare a modeling QAPP taking into consideration EPA *Guidance on QA Project Plans for Modeling* (EPA/240/R-02/007) (EPA QA/G – 5M)[3] and EPA Region 10's *Guidance for Quality Assurance Project Plans for Water Quality Modeling Projects* (EPA 910-R-16-007) (attached). The contractor shall work with EPA and WVDEP to determine which elements of the QAPP should be included.

Task 2.4 Deliverables – Ionic Toxicity Modeling QAPP

Task 2.5: Ionic Toxicity TMDL Model Development in Pilot Watershed

Upon approval of the modeling QAPP, the contractor shall develop the pilot model for the Lower Guyandotte River Watershed in accordance with the QAPP. Potential waters to be included in pilot model development are included in Attachment 1. In coordination with WVDEP and EPA, the contractor shall work to update this list of waters using the TMDL endpoint determined in Task 2.2 above, as well as other considerations. WVDEP is currently working in the Lower Guyandotte River Watershed to develop TMDLs for other pollutants (fecal coliform bacteria, total iron, and selenium) and will have completed pre-TMDL monitoring, pollutant source tracking, model land use, basic hydrology calibration and continuous discharge representation by October 2020. The contractor shall incorporate this recent data and model information supplied by WVDEP into the pilot ionic toxicity model for the Lower Guyandotte River Watershed. The contractor shall develop a calibrated and validated model, TMDL allocation scenarios, and a draft and a final version of the modeling report. Water quality calibration is contingent upon final ionic toxicity TMDL endpoint(s) to be determined in Task 2.2 above. ~~The contractor will~~shall ~~attend up to two in-person meetings to discuss the pilot TMDL model development. Any in-person meeting will~~shall ~~be held at the WVDEP Headquarters in Charleston, WV.~~ The modeling report shall be broken up into milestones in order to allow for review and comment on the model development. The first milestone shall include model background, including model set-up and watershed characteristics, with a description and discussion of the following elements:

- Watershed characteristics: Problem definition and management objectives; watershed description; extent of identified impairments and the methods and rationale used to identify those impairments; conceptual model - key processes and variables
- Model set-up: Description of the model; model boundaries; spatial and temporal resolution; source characteristics; data availability and quality, including data sources; time frame of simulation, including information pertaining to any necessary spin-up period; data gaps; assumptions made within the model and justification for those assumptions; model parameters/variables and associated sources such as literature, observed monitoring data, etc.

[3] https://www.epa.gov/quality/guidance-quality-assurance-project-plans-modeling-epa-qag-5m

The second milestone shall characterize the calibrated and validated model, including graphical representations of model output. The first and second milestone deliverables shall collectively serve as a log of all model decisions, assumptions, and steps taken. The amount of detail provided in the model documentation should be sufficient as to allow for an independent recreation of the results by someone who is experienced and technically proficient with the model. The contractor shall refer to "Guidance for Quality Assurance Project Plans for Water Quality Modeling Projects, EPA Region 10" for further guidance. The third milestone shall present a minimum of one~~two~~ TMDL allocation scenario and may include additional scenarios~~s~~ at the TOCOR's request. This milestone shall include graphical representations of endpoint/water quality standard attainment. The fourth milestone shall include discussion on TMDL requirements, including critical conditions, seasonal variability, margin of safety, and conservative assumptions. Additionally, the contractor shall provide model input and output files upon completion of the modeling report. Model files should include model input, model output for existing conditions and TMDL scenarios along with an index (or another appropriate document) that identifies each file included. All relevant GIS files, modeling logbooks/notebooks showing various scenarios or changes made to the model, as well as any model code necessary for reproducibility should also be delivered at this time. The contractor shall also provide either in-person or virtual training to WVDEP and EPA on how to use the modeling tools. Any in-person training shall occur at the WVDEP Headquarters in Charleston, WV.

Task 2.5 Deliverables:
Deliverable 2.5.1: Ionic Toxicity Modeling Report
- Deliverable 2.5.1.1: Model Background
- Deliverable 2.5.1.2: Calibrated and Validated Model
- Deliverable 2.5.1.3: TMDL Allocation Scenarios
- Deliverable 2.5.1.4: TMDL Requirements

Deliverable 2.5.2: GIS Files; Model files, including code; Model Logbooks/notebooks

Task 2.6: A Review and Synthesis of Potential Treatment Technologies to Reduce Ionic Toxicity

The contractor shall gather contemporary performance and cost information for ionic toxicity treatment methods, understand technical and financial constraints to accomplish effective treatment, explore innovative approaches to reduce ionic toxicity from existing sources and prevent ionic toxicity impacts from new sources and identify potential responsible parties in the Lower Guyandotte watershed. Information obtained is intended to inform future policy decisions for TMDL development and NPDES permitting, including a potential water quality standards variance.

The contractor shall accomplish these tasks through a literature review and by facilitating meetings with stakeholders including representatives from federal, state, academia, and private mining experts to discuss existing mine treatment options and costs, new mine best practices, design options, and costs, and examples of successful reduction, prevention, and mitigation as related to ionic toxicity. Some of these stakeholder meetings may be held in-person at WVDEP Headquarters in Charleston, WV.

When requested by the TOCOR, the contractor shall prepare agendas and meeting presentations and/or materials on technical aspects of the treatment technologies and their potential impacts to water quality attainment and be prepared to answer questions. The contractor shall prepare a draft and a final version of a Treatment Technology report providing a detailed overview of the treatment technologies that could potentially be used by existing and future sources in the pilot watershed. In consultation with WVDEP, the contractor shall include in the Treatment Technology report information pertaining to the responsible parties and property owners in the Lower Guyandotte River Watershed, including the locations of active NPDES permitted outlets and associated SMCRA permits and the NPDES and SMCRA permit history and locations of released mining outlets. The contractor shall also furnish all data, files and code used in development of the Treatment Technology report. The data must be accompanied by an inventory list describing the data in the contractor's submittal.

Task 2.6 Deliverables:

Deliverable 2.6.1: Agendas and technical presentations and/or materials for the stakeholder meetings and meeting summaries.

Deliverable 2.6.2: Treatment Technology Report

Deliverable 2.6.3: All data, files, and code for any statistical software used in treatment technology research and report development

D. SCHEDULE OF BENCHMARKS AND DELIVERABLES

As a general rule, upon receipt of a draft deliverable, EPA will have three weeks to collate internal and external comments and return to the contractor. The contractor shall then have an additional one week to make changes, which will be reviewed by EPA. EPA will have one week to indicate any necessary final adjustments. If final adjustments are needed, the contractor shall have three additional business days to finalize the document.

The deliverables and anticipated completion dates are as follows:

Task	Deliverables	Task Completion Timeframe	Task Finalization
Task 1 – Initiate project kickoff conference call	Deliverable 1: Meeting summary	Within 7 days of contract award	1 week after draft submittal
Task 2.1 – Facilitation Support for WV Ionic Toxicity Technical Workgroups	Deliverable 2.1: Agendas and technical presentations and/or materials,~~,~~ meeting summaries, ~~minutes~~ and correspondence for the Technical Workgroups.	T~~Entire t~~ask lasts for the duration of the task order. ~~within 11 months of completion of Task 1.~~ Monthly calls ~~for 6-9 months~~ to start within 2 months of completion of Task 1. Agendas and technical presentations and/or materials due 1 week ahead of meeting. Meeting summaries~~minutes~~ due 1 week after meeting.	Within 1 week after draft submittal of agendas and technical presentations and/or materials and meeting summaries ~~minutes~~

Task	Deliverables	Task Completion Timeframe	Task Finalization
Task 2.2 – Technical Support for Ionic Toxicity TMDL Endpoint Development	~~Deliverable 2.2.1: Ionic Toxicity TMDL Endpoint document and Ttechnical presentations for technical workgroupsTAC~~	~~One week ahead of meetings.~~	
	Deliverable 2.2.12: Endpoint document	Within 1 month of completion of all endpoint analyses	Within 2 weeks of receiving EPA comments
	Deliverable 2.2.~~3~~2: All data, files, and code for endpoint development	Within 1 month of completion of all endpoint analyses	Within 2 weeks of receiving EPA comments
Task 2.3 – Ionic Toxicity Model Selection	Deliverable 2.3: Ionic Toxicity Model Selection Memo	Within 2 months of completion of Task 1	Within 6 weeks after draft submittal
Task 2.4 – Ionic Toxicity Modeling QAPP Development	Deliverable 2.4: Ionic Toxicity Modeling QAPP	Draft QAPP for EPA QA team review within 3 months of completion of Task 2.3. Final approved QAPP within 6 months of Draft QAPP submittal.	Upon review and approval by EPA QA team
Task 2.5 – Ionic Toxicity Model Development	Deliverable 2.5.1: Ionic Toxicity Modeling Report	Broken up into milestones, see below for timeframe	Upon Completion of deliverable 2.5.1.4
	Deliverable 2.5.1.1: Ionic Toxicity Model Background	Research for Model Background within 6 months of Task 2.4 Draft QAPP. Model Background writeup within 1 month of completion of of model set-up, model calibration and validation.	Within 6 weeks after draft submittal
	Deliverable 2.5.1.2: Calibrated and Validated Ionic Toxicity Model	Within 5 ~~14~~ months of completion of Task 2.2 (Final Endpoint Document).	Within 6 weeks after draft submittal
	Deliverable 2.5.1.3: Ionic Toxicity TMDL Allocation Scenarios	Within 2 months of finalizing Deliverable 2.5.1.2	Within 6 weeks after draft submittal
	Deliverable 2.5.1.4: Ionic Toxicity TMDL Requirements	Within 1 month of finalizing Deliverable 2.5.1.3	Within 6 weeks after draft submittal
	Deliverable 2.5.2: Ionic Toxicity GIS Files, Model Files (including	Within 1 month of completion of deliverable 2.5.1	Within 2 weeks after draft submittal

Task	Deliverables	Task Completion Timeframe	Task Finalization
	code), Model Logbooks/notebooks		
Task 2.6 - A Review and Synthesis of Potential Treatment Technologies to Reduce Ionic Toxicity	Deliverable 2.6.1: Agendas and technical presentations and/or materials for the stakeholder meetings and meeting summaries	Technical presentations and materials due 1 week prior to meetings. Meeting summaries due 1 week after meetings.	Within 1 week after draft submittal of materials and meeting summaries
	Deliverable 2.6.2: Treatment Technology Report	Within 2 months of completion of stakeholder meetings described in 2.6.1	Within 6 weeks after draft submittal
	Deliverable 2.6.3: All data, files, and code for any statistical software used in treatment technology research and report development	Within 1 month of completion of 2.6.2.	Within 2 weeks after draft submittal

E. REPORTING

All documentation and reporting under this Task Order shall be in compliance with contract requirements.

F. DELIVERABLES AND GENERAL PERFORMANCE

The contractor shall participate in meetings and conference calls arranged by the EPA TOCOR. The contractor shall, when requested by the TOCOR, provide supporting documentation when EPA is reviewing draft deliverables to facilitate EPA review and approval of the contractor's work. Documentation shall include the electronic files and detailed, written explanation of all steps and decisions. The contractor is expected to comply with this request when it is received from the TOCOR regardless of whether such a request is described in the individual tasks of this PWS. The contractor is expected to furnish this information in such a manner that no proprietary software will be needed for EPA to read, interpret, replicate or model any work product of this agreement, unless otherwise noted in this PWS or by written permission of the EPA TOCOR. The objective is that anyone with the appropriate skill level can use the information produced under this Task Order to check or duplicate the contractor's work for replication and/or verification. With this understanding of how this Task Order's data will be used, any elements essential to successfully replicating analysis shall be provided to EPA in a commonly-used format.

The contractor shall provide to the TOCOR written evidence of the contractor's scientific/technical and editorial review on any Task Order **draft** product before submission to the EPA TOCOR for review. This process does not need to be performed by an independent peer reviewer. It is expected that all editorial review comments shall be addressed before deliverables are furnished to the EPA TOCOR for review (in the case of draft deliverables) or acceptance (in

the case of final deliverables); and that questions raised by scientific/ technical review will be either addressed or discussed with the EPA TOCOR prior to the contractor furnishing draft deliverables.

All deliverables (draft and final) to EPA shall be furnished in an electronic format that EPA can support (see TSAWP Contract PWS Section 4.0 Deliverables). All final deliverables shall be prepared according to EPA publication guidelines and shall be compliant with Section 508 of the Americans with Disabilities Act.

All draft and final deliverables from the contractor under this PWS are potentially subject to Freedom of Information Act requests.

All submittals to EPA shall be formatted as described below:

- Any written reports, summaries or analysis documents shall be in both electronic Microsoft Word© and PDFs in compliance with Section 508 requirements.
- Any and all spreadsheets, raw data, coding and modeling work (including all model runs with essential data to replicate model runs) shall be in electronic Microsoft Excel© or XML formats.

Appropriate electronic format that is supported by EPA and printing of all GIS data layers, maps, photos, bench sheets and other written material not easily printed or saved in the above formats will be discussed and a format agreed upon with the EPA TOCOR prior to submittal by the contractor.

The contractor shall maintain all electronic copies of the data, GIS, and other supporting documentation supplied to EPA in a task subdirectory (subject to regular system backups) and on disk for a minimum period of 10 years after project termination. The EPA retrieval of information contained in the contractor file(s) could be required during that time frame.

G. ANTICIPATED TRAVEL

All travel under this Task Order shall be in compliance with contract requirements and only according to specific written technical direction from the TOCOR. The vast majority of interactions will be conducted through conference calls. When in-person meetings are required, the length of the meetings and the amount of contract personnel needed for each trip will be provided to the contractor through written technical direction from the TOCOR. For planning purposes, the contractor shall assume seven overnight trips (covering two days and one night each), to Charleston, West Virginia for two people over the period of performance.

H. CONTRACTOR IDENTIFICATION

Contractor personnel shall always identify themselves as Contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative.

The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the EPA TOCOR.

I. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS:

The contractor shall immediately notify the EPA Contracting Officer, COR and TOPO of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur $20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. QUALITY ASSURANCE SURVEILLANCE PLAN: Per contract requirements as supplemented herein:

EPA anticipates that the contractor's work will be judged "satisfactory" according to the QASP if the TOCOR's edits to deliverables are no more than ten percent (10%) of the content of any draft deliverable, or less than two percent (2%) of any final deliverable. In addition, EPA anticipates that the Contractor's work will be judged "satisfactory" according to the QASP if less than ten percent (10%) of the pages of written final deliverables contain the TOCOR's edits for such things as grammar, punctuation and format. The EPA TOCOR can upon request furnish a copy of the EPA correspondence manual for the contractor's use.

K. VALIDATION OF SECTION 508 COMPLIANCE OF TASK ORDER DELIVERABLES

The Contractor shall support the TOCOR in conducting a "Final Deliverable Validation" to ensure compliance with Section 508 and the Federal Acquisition Regulations (FAR) related to "electronic and information technology (EIT) deliverables". The Contractor shall furnish certification, in writing, to the TOCOR that the Contractor has complied with EPAAR Clause 1552.211-79 "Compliance with EPA Policies for Information Resources Management", including the requirement that all electronic and information technology (EIT) deliverables be Section 508 compliant in accordance with the policies referenced at http://www.epa.gov/accessibility/ .

L.TECHNICAL DIRECTION

The Contract level COR or an authorized individual is permitted to provide technical direction. technical direction must be within the statement of work of the contract and includes: (1) Direction to the contractor which assists the contractor in accomplishing the Performance Work Statement, (2) Comments on and approval of reports or other deliverables. technical direction will be issued in writing or confirmed in writing within five (5) calendar days after verbal issuance. One copy of the technical direction memorandum will be forwarded to the Contracting Officer and the Contract Level Contracting Officer's Representative.

M. REFERENCES

Links to background documents relevant to this PWS:

U.S. EPA. 2011. A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams. Office of Research and Development, National Center for Environmental Assessment, Washington, DC. EPA/600/R-10/023F.
https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=233809

U.S. EPA. 2011. The Effects of Mountaintop Mines and Valley Fills on Aquatic Ecosystems of the Central Appalachian Coalfields (2011 Final). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-09/138F, 2011.
https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=225743

U.S. EPA. 2016. Draft Field-Based Methods for Developing Aquatic Life Criteria for Specific Conductivity. Office of Water, Washington, DC. EPA-822-R-07-010.
https://www.epa.gov/wqc/draft-field-based-methods-developing-aquatic-life-criteria-specific-conductivity

N. GOVERNMENT FURNISHED INFORMATION

The following information can be provided to the contractors by request:

- Contract Task Order Deliverables for 2010 West Virginia Ionic Toxicity Pilot TMDL and Endpoint Development

Attachment 1
Potential West Virginia Waters in the Lower Guyandotte River Watershed to be included in pilot model development

STREAM_NAME	ANCODE
Russell Creek	WVOG-1
Davis Creek	WVOG-3
Edens Branch	WVOG-3-0.5A
Big Ugly Creek	WVOG-38 (segments above RM 11.5 for Assessment Unit Order 1 and 2)
Left Fork/Davis Creek	WVOG-3-A
Right Fork/Davis Creek	WVOG-3-B
Rockhouse Fork	WVOG-44-D
Limestone Branch	WVOG-48
Ed Stone Branch	WVOG-49-A
Trace Fork	WVOG-49-D
Perrys Branch	WVOG-49-E-1
Crawley Creek	WVOG-51
Fowler Branch	WVOG-51.5
South Fork/Crawley Creek	WVOG-51-G.5
Godby Branch	WVOG-53
Rocky Branch	WVOG-55
Peach Creek	WVOG-64
Mud River	WVOGM (segments above Mud Lake Reservoir for Assessment Unit Order 1, 2, and 3)
Merrick Creek	WVOGM-1
Tanyard Branch	WVOGM-1.5
Cyrus Creek	WVOGM-2
Sugartree Branch	WVOGM-47
Stanley Fork	WVOGM-48
Ballard Fork	WVOGM-49